

# MicroLine CCD Camera

## ML4720

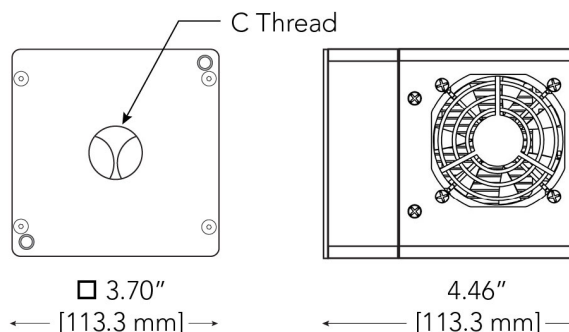
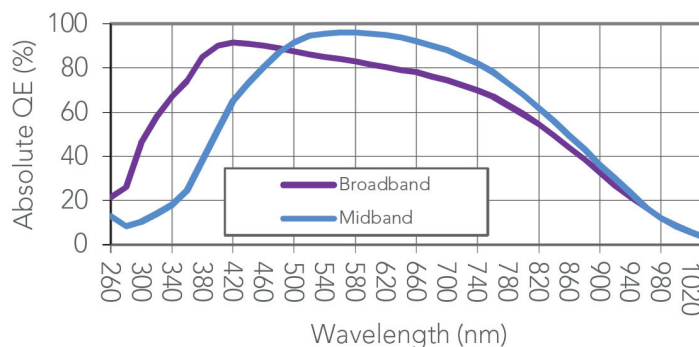
The ML4720 uses a back-illuminated frame transfer CCD. Half of the sensor is covered with a metal mask; half is exposed to light. The exposed side of the sensor is centered in the camera aperture. The image is shifted under the mask in about 10 milliseconds.

### Technical Data

Sensor Type	Back Illuminated Frame Transfer CCD
Sensor	e2v CCD47-20-1-339 (MB) or -331 (BB)
Active Pixels	1024 x 1024
Pixel Size (microns)	13 x 13 $\mu\text{m}$
Imaging Area (Diagonal)	13.3 X 13.3 mm (18.8 mm)
Full Well Capacity	100000 electrons
Typical_Readout Noise	13e- at 500 kHz; 18e- at 2 MHz
Typical Gain	2.4e-/ADU
Dynamic Range	79.7 dB
Anti-Blooming	None
Cooling Method	Air (Optional liquid)
Max. Cooling (Air)	55°C below ambient
Temperature Stability	0.1°C
Dark Current (typical)	0.3 eps at -30C
Interface	USB 2.0
Digitization Clock	500 kHz and 2 MHz per channel
Data Bit Depth	16 bit
Non-Linearity	<1%
Channels	2 (optional 1)
Shutter	Optional 25mm
Lens Mount	C-mount; Nikon or Canon mount
Subarray Readout	Standard
External Trigger In/Out	Standard
SDK / Software	USB2 / FLIGrab
Weight	2.8 lbs (1.2 kg)
Environment	-30°C to 45°C   10% - 90% Relative Humidity
Power	12V (100-240V AC to 12V DC power supply included). With TEC off: <1A.



### Absolute Quantum Efficiency



See [www.flicamera.com](http://www.flicamera.com) for alternate configurations